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10/567,956	03/09/2006	Wilhelm Tobben	14069-00001-US	3706
23416 7590 04/01/2008 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
JACOBSON, MICHELE LYNN				
ART UNIT		PAPER NUMBER		
1794				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/567,956

## Applicant(s)

TOBBEN ET AL.

## Examiner

MICHELE JACOBSON

## Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 2/10/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-4, 6 and 9-12 rejected under 35 U.S.C. 102(b) as being anticipated by Toshiaki et al. European Patent Application Publication 920808 (hereafter referred to as Toshiaki).

1. Toshiaki teaches that fibrous casings are preferred for sausage such a casing has good appearance and can produce an image that the sausages are of high quality. (Para. 2) Polyamide films such a polyhexamethylene adipamides which are employed as synthetic plastic casings are advantageous in that they give some smoking effect under high humidity conditions, that they have high tensile strength at break, high impact strength, excellent dimensional stability and excellent oxygen barrier properties. (Para. 3) However, the smoking effect achieved with polyamide films is very small compared with those achieved by fibrous casings. (Para. 3) By the addition of 0.1 to 10% by weight of cellulose powder to a polyamide/cellulose acetate propionate sausage casing its smoking performance is improved and the resulting casing has a matted and grained uneven surface which gives the impression that the encased product is of high

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quality. (Para. 12) As the polyamide PA6, PA6/66, PA11, PA12, PA6/12 and mixtures thereof are used. (Para. 11) The film of the invention can be subjected to biaxial orientation stretching to about 1.0-3.5 fold in both directions. When the casing is immersed in a 95° C hot water bath for 30 seconds it shrinks by 1 to 30% in both directions so that the casing material remains in intimate contact with the contents even after the smoked product is cooled thus giving a crumple-free final cased product.

(Para. 14) The water vapor permeability for an example casing of the invention (example 2) comprising 75% polyamide to which cellulose acetate propionate and cellulose powder had been added is recited to be  $293 \text{ g/m}^2\cdot\text{day}\cdot\text{bar}$  ( $\text{cm}^3/\text{m}^2\cdot\text{day}\cdot\text{bar}$ ).

(Table 1) The thickness of this casing is recited to be 40  $\mu\text{m}$ . (Para. 20) Comparative example 2 comprising a 40  $\mu\text{m}$  film composed of biaxially stretched PA6 resin was recited to have a water vapor permeability of  $112 \text{ g/m}^2\cdot\text{day}\cdot\text{bar}$ . (Para. 22, Table 1) The depth of the smoked skin for example 2 and comparative example 2 were recited to be 2 mm and 0.5 mm respectively. (Table 2)

3. Since claim 1 recites a single layer structure comprising a mix of polyamide (Toshiaki- polyamide) and natural fibers (Toshiaki-cellulose powder) with a thickness between 5-200  $\mu\text{m}$  (Toshiaki- 40  $\mu\text{m}$ ) and a water vapor permeability of greater than 25  $\text{cm}^3/\text{m}^2\cdot\text{day}\cdot\text{bar}$  (Toshiaki-293  $\text{cm}^3/\text{m}^2\cdot\text{day}\cdot\text{bar}$ ) Toshiaki anticipates all the limitations set forth in claim 1. The cellulose powder recited by Toshiaki is interpreted to be equivalent to and effectively composed of cellulose fibers since the recitation of a fiber geometry is not an exclusionary descriptive.

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4. Toshiaki recites that the casing can be biaxially stretched anticipating claim 2.

Toshiaki recites that the polyamides used can be PA6, PA6/66, PA11, PA12, PA6/12 and mixtures thereof anticipating members of the Markush group in claim 3. Claim 4 recites in one embodiment only the limitations of a one layer casing comprising 30-99.9 wt % of an aliphatic polyamide and 0.1-70 wt. % of natural fibers which is clearly anticipated by Toshiaki.

5. The recitation in claim 6 of a 3 layer structure where all the layers are comprised of a composition that is a combination of claim 4 and claim 3 is interpreted by the examiner to be anticipated by the single layer structure recited by Toshiaki. Since all the layers of this 3 layer structure could be comprised of the same material, it would be impossible in the final casing article to differentiate one layer from another since all the layers would be coextruded. As such, in this case, the final article would have the same composition and properties regardless of whether it was coextruded in a 3 layer structure or as a single layer structure. As such, Toshiaki clearly anticipates the casing as recited in claim 6.

6. Toshiaki is directed towards sausage casing as claimed in claims 9 and 10 and recites a thickness of 40  $\mu\text{m}$  which falls within the ranges set forth in claims 11 and 12.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiaki et al. European Patent Application Publication 920808 (hereafter referred to as Toshiaki) and Sears et al. U.S. Patent Application Publication No. 2002/0000683 (hereafter referred to as Sears).

9. Toshiaki teaches what has been recited above but is silent regarding the length of the cellulose fibers within the cellulose powder recited

10. Sears teaches improved composites containing cellulosic pulp fibers dispersed in a matrix, wherein the matrix comprises a polymeric material and said cellulosic pulp fibers comprise greater than 1% and less than 60% by weight of the composite. (Para. 16) Suitable polymeric material includes polyamides, specifically nylon 6, nylon 12, nylon 66 or mixtures thereof. (Para. 24, 25) The granulated cellulosic fibers typically have an average length of between 0.1 and 6 mm (100-6000  $\mu$ m) An advantage of the composition recited is the reduced discoloration in the resultant composite. Prior use of pulp fibers typically resulted in substantial or severe discoloration of the final product. This discoloration is significantly reduced or avoided using the composition of the invention. (Para. 31) One surprising advantage resulting from the invention was the

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ability to melt blend the polymeric material with pulp fibers at lower temperatures than the melting temperature of the polymeric material. (Para. 44) The composition of the invention is recited to be useful for melt extrusion. (Para. 45)

11. Toshiaki teaches the benefits of both polyamide and cellulose fiber films, the combination of which is recited in the inventive film in order to harness the benefits of improved appearance for a film with higher tensile strength. One of ordinary skill in the art at the time the invention was made would have been motivated to seek out a combination of only polyamide with cellulose fiber without the need for cellulose acetate propionate in order to simplify the invention of Toshiaki and reduce the complexity of the production process.

12. The invention as recited by Sears would have been an obvious choice for this replacement because of the benefits of reduced discoloration in the resultant composite and the ability to melt blend the polymeric material with pulp fibers at lower temperatures than the melting temperature of the polymeric material as recited by Sears. The production of a sausage casing as recited by Toshiaki using the inventive composition of Sears would have resulted in the invention as claimed in claims 1-6 and 9-13.

13. Regarding claims 11-13: The thickness of films is well known to affect their permeability. In the sausage art it is well known that depending on the sausage being manufactured different levels of water permeability are desired. For example, the water permeability of the casing for a dry sausage that is being cured is desired to be high in order to prevent the formation of jelly between the sausage and the casing and to

facilitate the curing process. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the thickness of the casing resulting from the combination of Toshiaki and Sears depending on the type of sausage being encased. This optimization would have resulted in the thicknesses recited in claims 11-13.

14. The combination of Sears and Toshiaki is silent regarding the area stretching ratio and degree of reshrinkage of the sausage casing film.

15. Since the composition taught by Sears is the same as that taught by applicant (same polyamides, substantially overlapping percentages of cellulose fiber (1-60% for Sears compared to 0.1-70% for applicant), it is the examiners opinion that the area stretching ratio and degree of reshrinkage of the sausage casing film recited in claims 14 and 15 would be inherent to the sausage casing comprising the film taught by Sears.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson  
Examiner /M. J./  
Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794